

City of Yuma  
Building Safety Division

Post Office Box 13013  
Yuma, Arizona 85366-3013

PHONE:

(928) 373-5163 or (928) 373-5165

FAX:

(928) 373-5164 or (928) 373-5166

TYPE OF PERMIT REQUESTED:

Permit #: \_\_\_\_\_

Job Address: \_\_\_\_\_ Lot/Suite#: \_\_\_\_\_

Job Name: \_\_\_\_\_

<b>Property Owner:</b>		Phone:	
Address:		Fax:	
City/State/Zip:		Mobile:	
E-mail address:			
<b>Contractor:</b>		Phone:	
Contractor Address:		Fax:	
City/State/Zip:		Mobile:	
E-mail address:			
<b>Designer/Architect:</b>		Phone:	
Architect Address:		Fax:	
City/State/Zip:		Mobile:	
E-mail address:			
<b>Engineer:</b>		Phone:	
Engineer Address:		Fax:	
City/State/Zip:		Mobile:	
E-mail address:			

Does this address have an overhead service: \_\_\_\_\_ Yes \_\_\_\_\_ No

Septic: \_\_\_\_\_ Yes \_\_\_\_\_ No

Scope of Work: \_\_\_\_\_ of

Valuation: \_\_\_\_\_ Plan Review Fees: \_\_\_\_\_

Applications for which no permit is issued within 180 days following the date of this application shall be expired by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the building official.

Signature of Owner/Agent: \_\_\_\_\_ Date: \_\_\_\_\_

\*\*\*\*\*OFFICE USE ONLY\*\*\*\*\*

1st Floor: \_\_\_\_\_ Type of Construction: \_\_\_\_\_

2nd Floor: \_\_\_\_\_ Occupancy Class: \_\_\_\_\_

3rd Floor: \_\_\_\_\_ Zoning District: \_\_\_\_\_

Storage: \_\_\_\_\_ Flood Zone: \_\_\_\_\_

Garage/Carport: \_\_\_\_\_ Occupant Load: \_\_\_\_\_

Balcony \_\_\_\_\_

Portico \_\_\_\_\_

Patio \_\_\_\_\_

Patio \_\_\_\_\_ Warehouse \_\_\_\_\_

\*\*\*\*\*

Example

# Patio Cover Site Plan

Scale: 1" = 20'

## Lot Coverage Calculation

Lot size: 75' x 100' = 7,500 sq./ft.

Building Area

Existing Residence: 36' x 61' = 2,196 sq./ft.

New Patio: 12' x 30' = 360 sq./ft.

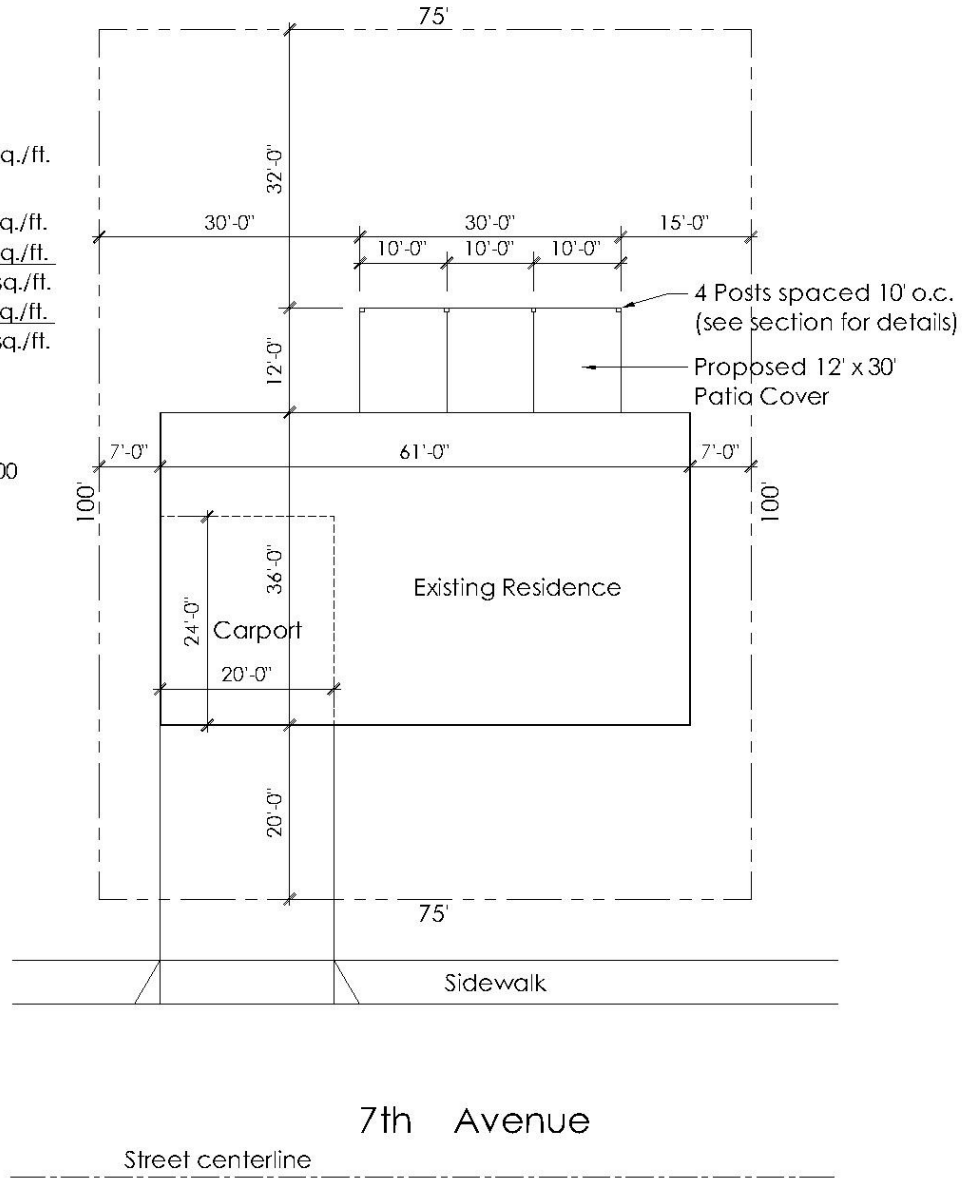
Subtotal = 2,556 sq./ft.

-Carport (max. 600 sq./ft.) = 600 sq./ft.

Total = 1,956 sq./ft.

% Lot Coverage =  $\frac{\text{Building Area}}{\text{Lot Area}}$

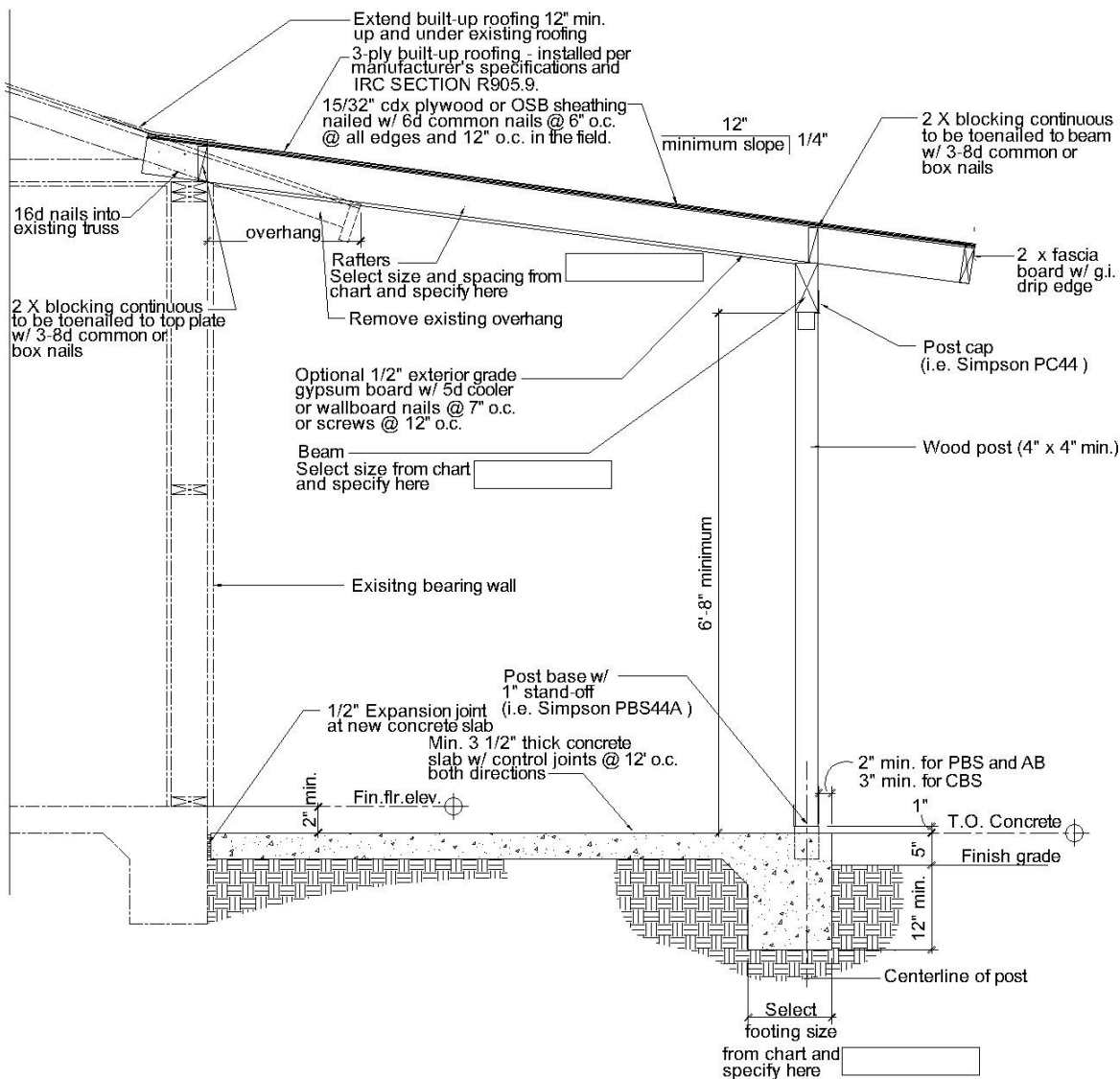
$$= \frac{1,956 \text{ sq./ft.}}{7,500 \text{ sq./ft.}} \times 100$$
$$= 26.1 \%$$



Example

# Patio Cover Cross-Section

Scale: 1/2" = 1'-0"



# Patio Cover Rafter Sizes

To choose the rafter size and spacing for your patio cover simply determine your desired depth of the patio and span of the rafter measured from the edge of the house wall to the center of the beam, go to that span in the left hand column of the chart below and determine the rafter which will best suit your application. The left hand rafter column is highly recommended for use. It is based upon 2003 International Residential Code, Table R802.5.1(1) for a 20 psf live load and a 10 psf dead load and would permit a future room enclosure underneath. The right hand rafter column is the code minimum per 2003 International Residential Code and would not permit a future enclosure underneath. It is based upon a 10 psf live load and a seven psf dead load and is not recommended for use. This chart is based upon the use of Douglas Fir or Hem-Fir #2 or better lumber, 15/32" plywood or OSB sheathing, a 3-ply built-up roof, and an optional 1/2" exterior gypsum board ceiling and permits a 24 inch overhang beyond the beam. If your desired design does not comply with these parameters, then this chart may not be appropriate, in which case, one of our plans examiners would be happy to help you customize your solution.

<b>Rafter Span</b>	<b>Recommended Rafter Size &amp; Spacing</b>	<b>Code Minimum Rafter Size &amp; Spacing</b>
6 feet	2" x 6" @ 24" o.c.	2" x 4" @ 24" o.c.
8 feet	2" x 6" @ 24" o.c.	2" x 4" @ 24" o.c.
10 feet	2" x 6" @ 24" o.c.	2" x 4" @ 16" o.c.
12 feet	2" x 6" @ 24" o.c.	2" x 6" @ 24" o.c.
14 feet	2" x 6" @ 16" o.c. 2" x 8" @ 24" o.c.	2" x 6" @ 24" o.c.
16 feet	2" x 6" @ 12" o.c. 2" x 8" @ 16" o.c. 2" x 10" @ 24" o.c.	2" x 6" @ 16" o.c. 2" x 8" @ 24" o.c.
18 feet	2" x 8" @ 12" o.c. 2" x 10" @ 16" o.c. 2" x 12" @ 24" o.c.	2" x 6" @ 12" o.c. 2" x 8" @ 24" o.c.
20 feet	2" x 8" @ 12" o.c. 2" x 10" @ 16" o.c. 2" x 12" @ 24" o.c.	2" x 8" @ 16" o.c. 2" x 10" @ 24" o.c.

# Patio Cover Beam and Footing Sizes

Once you have determined the depth of your patio, selected the rafter size, spacing and span from the chart on the previous page, and determined your desired column spacing, you may utilize the chart on page 2 to determine the required beam and footing sizes for your patio cover.

The beam sizes are indicated first and sometimes more than one size is suitable for use. The beam sizes not in parenthesis are highly recommended for use. They are based upon a 20 psf live load and a 10 psf dead load and would permit a future room enclosure underneath. The beam sizes in parenthesis are code minimums per 2003 International Residential Code, Appendix H, would not permit a room enclosure underneath, and are not recommended for use. They are based upon a 10 psf live load and a seven psf dead load. The majority of the beams are based upon dimensional Douglas Fir #2 or better. Where the capacities of standard dimensional beams are exceeded, either GL-1, GL-2 or GL-3 is shown in the chart. These designations represent glulam beams with minimum values for  $E = 1,800,000$  psi,  $F_b = 2,400$  psi, and  $F_v = 165$  psi. These are numbers your supplier will understand. You may use either a 3-1/8" x 10-1/2" or a 5-1/8" x 9" glulam where GL-1 is indicated. GL-2 stands for either a 3-1/8" x 12" or 5-1/8" x 10-1/2" glulam. GL-3 represents either a 3-1/8" x 13-1/2" or a 5-1/8" x 12" glulam.

The footing sizes follow the beam sizes and are in *italics*. The footing sizes not in parenthesis are for the intermediate columns and the footing sizes in parenthesis are for the end columns. 2003 International Residential Code, Appendix H permits columns to be supported by the slab, if the columns do not support live and dead loads in excess of 750 pounds per column. However, we strongly recommend that you utilize a minimum 12 inch by 12 inch footing where slab support is permitted.

The chart is based upon the use of 15/32" plywood or OSB sheathing, a 3-ply built-up roof, and an optional 1/2" exterior gypsum board ceiling and permits a 24 inch overhang beyond the beam. If your desired design does not comply with these parameters, then this chart may not be appropriate, in which case, one of our plans examiners would be happy to help you customize your solution.

**Post Spacing****Depth of Patio or Span of Rafter**

	6 feet	8 feet	10 feet	12 feet	14 feet	16 feet	18 feet	20 feet
4 feet	4 x 4 slab	4 x 4 slab	4 x 4 slab	4 x 4 slab	4 x 4 slab	4 x 4 slab	4 x 4 slab	4 x 4 12 x 12 (slab)
6 feet	4 x 4 slab	4 x 4 slab	4 x 4 slab	4 x 6 (4 x 4) 12 x 12 (slab)	4 x 6 (4 x 4) 12 x 12 (slab)	4 x 6 (4 x 4) 13 x 13 (slab)	4 x 6 (4 x 4) 13 x 13 (slab)	4 x 6 (4 x 4) 14 x 14 (slab)
8 feet	4 x 6 (4 x 4) slab	4 x 6 (4 x 4) 12 x 12 (slab)	4 x 6 (4 x 4) 12 x 12 (slab)	4 x 6 (4 x 6) 13 x 13 (slab)	4 x 8 (4 x 6) 14 x 14 (slab)	4 x 8 (4 x 6) 14 x 14 (slab)	4 x 8 (4 x 6) 15 x 15 (slab)	4 x 8 (4 x 6) 16 x 16 (slab)
10 feet	4 x 6 (4 x 6) 12 x 12 (slab)	4 x 8 (4 x 6) 13 x 13 (slab)	4 x 8 (4 x 6) 14 x 14 (slab)	4 x 8 (4 x 6) 14 x 14 (slab)	4 x 8 (4 x 6) 15 x 15 (12 x 12)	4 x 10 (4 x 8) 16 x 16 (12 x 12)	4 x 10 (4 x 8) 17 x 17 (12 x 12)	4 x 10 (4 x 8) 18 x 18 (13 x 13)
12 feet	4 x 8 (4 x 6) 13 x 13 (slab)	4 x 8 (4 x 6) 14 x 14 (slab)	4 x 10 6 x 8 (4 x 8) 15 x 15 (slab)	4 x 10 (4 x 8) 16 x 16 (12 x 12)	4 x 10 (4 x 8) 17 x 17 (12 x 12)	4 x 10 (4 x 8) 18 x 18 (13 x 13)	4 x 12 6 x 10 (4 x 8) 18 x 18 (13 x 13)	4 x 12 6 x 10 (4 x 10) 19 x 19 (14 x 14)
14 feet	4 x 10 6 x 8 (4 x 6) 14 x 14 (slab)	4 x 10 (4 x 8) 15 x 15 (slab)	4 x 10 (4 x 8) 16 x 16 (12 x 12)	4 x 12 6 x 10 (4 x 8) 17 x 17 (12 x 12)	4 x 12 6 x 10 (4 x 10) 18 x 18 (13 x 13)	4 x 12 6 x 10 (4 x 10) 19 x 19 (14 x 14)	6 x 12 (4 x 10) 20 x 20 (14 x 14)	6 x 12 (4 x 10) 21 x 21 (15 x 15)
16 feet	4 x 10 (4 x 8) 14 x 14 (slab)	4 x 12 6 x 10 (4 x 8) 16 x 16 (12 x 12)	4 x 12 6 x 10 (4 x 10) 17 x 17 (12 x 12)	6 x 12 (4 x 10) 18 x 18 (13 x 13)	6 x 12 (4 x 10) 19 x 19 (14 x 14)	6 x 12 (4 x 10) 20 x 20 (14 x 14)	6 x 12 (4 x 12) 21 x 21 (15 x 15)	GL-1 (4 x 12) 22 x 22 (16 x 16)
18 feet	4 x 12 6 x 10 (4 x 8) 15 x 15 (12 x 12)	4 x 12 6 x 10 (4 x 10) 17 x 17 (12 x 12)	6 x 12 (4 x 10) 18 x 18 (13 x 13)	6 x 12 (4 x 10) 19 x 19 (14 x 14)	6 x 12 (4 x 12) 20 x 20 (15 x 15)	GL-2 (4 x 12) 21 x 21 (15 x 15)	GL-2 (6 x 10) 23 x 23 (16 x 16)	GL-2 (6 x 12) 23 x 23 (17 x 17)
20 feet	4 x 12 6 x 10 (4 x 10) 16 x 16 (12 x 12)	6 x 12 (6 x 10) (4 x 12) 18 x 18 (13 x 13)	6 x 12 (6 x 10) (4 x 12) 19 x 19 (14 x 14)	GL-2 (6 x 10) (4 x 12) 20 x 20 (14 x 14)	GL-2 (6 x 12) (6 x 12) 21 x 21 (15 x 15)	GL-3 (6 x 12) (6 x 12) 23 x 23 (16 x 16)	GL-3 (6 x 12) (6 x 12) 24 x 24 (17 x 17)	GL-3 (6 x 12) (6 x 12) 25 x 25 (17 x 17)